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## ABSTRACT

The reported participation rates and status of Latinos in vocational-technical education programs approved by the Massachusetts Board of Education were reviewed. The study was restricted to persons in grades 9-12 during the 1990-91 school year. Fifteen members of a panel were also interviewed regarding their understanding of Latino experiences in the state's vocational education system. Panel members were familiar with various aspects of public schooling and vocational education. Findings indicated that a large number of Latino students were enrolled in various kinds of vocational technical education programs and schools. Interviewees reported potential problems in recruiting Latinos, e.g., tracking of students of color into lower-skilled curriculum paths and a community perception of vocational education as a "dumping ground." Very few Latino students were enrolled in postsecondary and postgraduate vocational education programs. Interviewees reported a high degree of dissatisfaction regarding the number of Latino or bilingual personnel. Topics for further examination were suggested, including increased recruitment and retention of Latino students, increased number of Latino staff members and role models, effective measurement of the status and assessment of Latino students' needs, increased parental and community participation in vocational education, and use of vocational education to teach appreciation of a multicultural learning environment. (19 endnotes) (YLB)

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ED 346325

**AN EXAMINATION OF LATINO EXPERIENCES  
IN VOCATIONAL EDUCATION:  
IMPLICATIONS FOR EDUCATIONAL  
POLICY AND REFORM IN MASSACHUSETTS**

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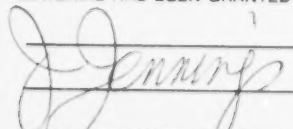
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## Executive Summary

This report may be the first systematic study of the participation patterns of Latino students in vocational technical education in Massachusetts. The investigation was based on a review and analysis of enrollment data provided by the Division of Occupational Education of the State Department of Education and interviews with a panel of fifteen educators across the state who are knowledgeable of various facets of vocational technical education in the commonwealth.

The purpose of this study is to provide an introduction and overview of the participatory status of Latinos in vocational technical education. This report begins by providing a description of the broad economic context in Massachusetts at this time for a better understanding of the importance and timeliness of this topic. Following the findings, this report concludes with recommendations, some of which are outlined below:

- Strengthen efforts to collect, analyze, and present data and analysis about the participatory experiences of Latinos in vocational technical education;
- Implement major efforts to increase the participation of Latino students in vocational technical education programs in ways that do not reflect segregation;
- Encourage and generate studies that provide insight regarding factors explaining success on the part of Latino students in vocational technical education;
- Significantly and quickly increase the number of Latino faculty and staff not only for the benefit of Latino students, but for other students as well;
- Strongly encourage the involvement of Latino parents and provide a range of efforts to assist Latino parents to become more familiar with the regulations governing vocational technical education;
- Provide Spanish and English curriculum materials and teaching aids for Latino student; and

- Encourage greater efforts by teachers, administrators, and government to acknowledge the importance of and their support for racial and ethnic diversity in the student body, in the teaching and administrative sectors, and in the development of a multicultural and multiracial curriculum that is utilized to raise the critical thinking skills of all students.

## Introduction

As the Commonwealth of Massachusetts enters the twenty-first century it is encountering major social, economic, and demographic transformations. The latter is witnessed in the rapid growth of communities of color at a statewide level and in some cities and towns of Massachusetts. However, at the same time that the populations of color are growing, whites are leaving the state in significant numbers. During the 1980s, for example, the net difference between the number of whites leaving the state and those whites entering it was 146,000. While Massachusetts experienced a net migration of 25,000 persons, this net influx "was due solely to the arrival of enough nonwhites and Hispanics to more than offset that loss."<sup>1</sup>

As Latinos, blacks, and Asian-descent people continue to grow in numbers, the economy of the commonwealth must be able to provide opportunities for their social mobility. But this will not occur if these groups do not have the necessary education and training to respond to the economic needs of Massachusetts. As the newest and largest population of color in Massachusetts, Latinos must be equipped with quality schooling in the areas of both academic studies and vocational technical education.

The educational and employment status of young Latinos in many of the larger American cities, including those in Massachusetts, suggests that significant numbers of this group are not being equipped with job-related skills to realize meaningful socio-economic mobility as they grow older. Many social scientists, educators, and demographers have discussed the potential social, economic, and perhaps even the political crisis that

this situation presents for all Americans. As pointed out in a report of the Hispanic Policy Development Project a few years ago:

The health and stability of a pluralistic society is based on the promise of inclusion, not exclusion. As this nation goes about the business of reordering its priorities and adjusting to shifting economic realities in both domestic and international arenas, it cannot be unmindful that maintaining large numbers of Americans as a permanent class of working poor represents a grave danger to national cohesion and confidence.<sup>2</sup>

The fact that many members of the various Latino groups in the United States are poor and also have limited English proficiency makes the warning by the Hispanic Policy Development Project even more dire. A recent report stated that the nation's population of limited English-proficient (LEP) adults will total more than 17 million by the year 2000. Vocational education can play a critical role in meeting the needs of this population.<sup>3</sup> Public education, and particularly high-quality vocational education, can be a critical key in ensuring that Latino youth have the tools to participate effectively in the state's economy.

According to the U.S. Bureau of the Census, in 1980 there were 6.8 million American adults with limited English proficiency; by 1990 this figure nearly doubled to 11.6 million. While this growth represents a serious challenge to the nation's educational systems, it nevertheless could be tackled as an opportunity. This view was suggested by Sheri C. Kallembach in a report to the National Center for Research in Vocational Education. She asserted that:

In light of projected shortages in the entry level labor pool, and projections that limited-English proficient (LEP) individuals will constitute an increasing and

significant percentage of this country's labor force, individuals with limited English proficiency represent a valuable human resource. During the 1990s, this country will be faced with the challenge of providing LEP youth and adults with both the knowledge and skills that will enable them to succeed in the nation's rapidly changing economy.<sup>4</sup>

But the economic opportunities that Kallembach refers to should not be confined to "entry level labor." In fact, the economy will be in great need of highly skilled labor which Latinos will be able to fill if they receive the appropriate education.

Due to rapid impoverization and growth in the number of Latinos it is especially critical for the social and economic well-being of the Commonwealth of Massachusetts to provide quality education to this group. As stated in a report of Jobs for the Future, an increasing number of public policy analysts, civic leaders, and governmental officials are now insisting that effective strategies for economic development must reflect "genuine linkages between social deficiencies (poor education, family instability, poverty) and deficiencies in economic competitiveness."<sup>5</sup> Thus, providing and guaranteeing educational opportunity for citizens of color can be one effective tool for economic development.

Based on several social and economic indicators, as well as statements made in the commonwealth's educational community, this report proposes that attempts to prepare Latino youth for upward mobility in the world of work in Massachusetts have not been generally effective. In a recent survey of state poverty rates, for instance, the Institute for Research and Poverty reported that Massachusetts had the highest Latino poverty rate in the nation (47.0%).<sup>6</sup> According to a report by sociologist Maria Estela Carrion, "Hispanic Youth in Boston: In Search of Opportunities and Accountability," school-to-work transition programs do not reach a majority of the Latino students.<sup>7</sup>

Furthermore, in another survey sponsored by the Boston Foundation, it was reported that almost 70% (69.3%) of all Latinos employed in Boston earned less than \$7.51 per hour compared to 52.6% of all non-Latinos.<sup>8</sup>

The educational status of Latinos in academic programs in public schools has led many to begin looking at vocational technical education as a way to improve educational opportunities for this group. Recently, for example, the National Center for Research in Vocational Education cited as "an exemplary program" a vocational education program to discourage bilingual students from dropping out of the Cambridge Rindge and Latin High School. The effort at this school has been effective as evidenced by a major decline in the drop-out rate of Latinos enrolled in the Rindge Technical Vocational Program. The fact that Latinos in vocational education generally have a lower high-school drop-out rate than Latinos in academic programs has started to motivate interest in expanding access for Latinos in vocational education.<sup>9</sup> In addition to its pedagogical impact, vocational technical education can also be an effective way to equip Latino youth with the training and skills necessary to acquire jobs that pay relatively high and stable wages. Despite the precipitous downturn and fluctuations in the economy of Massachusetts, there will still be a need for an increasing number of workers with appropriate training and skills to work in the construction, health, and manufacturing sectors.

There is another important reason for examining the status of young Latinos in vocational education in Massachusetts at this time. New federal regulations now require states to examine and document the extent of access for "special" or disadvantaged populations. The Carl D. Perkins Vocational and Applied Technology Education Act of

1990 was signed into law on September 28, 1990. This Act calls for an expansion of efforts to reach "special populations including the poor, the handicapped, economically disadvantaged, disabled, single parents, foster children, women and the limited English proficient" populations.<sup>10</sup> As reported by the Center for Law and Education in Washington D.C., now states must assess and then develop plans to address the "capability and responsiveness of programs to meet the needs of special populations for access to, and services in, vocational education, including students who are: disabled, limited English proficient, in programs designed to eliminate sex bias, or in correctional institutions."<sup>11</sup>

This topic is significant not only for young Latinos, but for the entire citizenry of Massachusetts. Several social and economic developments that will have great and lasting impact on the quality of life in this society are unfolding at the state and national level. Some of these developments include: major changes in the country's demography, and work force composition; sweeping shifts in the larger employment sectors of the nation; the regional, national, and international movement of capital; the continual loss of economic competitiveness on the part of the United States; and, the changing education and training needs necessary for the work force to achieve a higher level of productivity within a context of rapidly evolving technology.

All of these developments are directly or indirectly related to the type and quality of education received by traditionally disadvantaged groups. Latinos, especially youth, must be trained in ways that will allow them to be productive, rather than costly to society. Vocational technical education is a primary tool for providing such kinds of training and education.

A first step in developing an understanding of how Latinos might utilize the system of vocational technical education in Massachusetts is the generation of a status report on this topic. Such a first step should give some indication of the status of information regarding the experiences of Latinos in Massachusetts vocational education. Furthermore, it should begin to identify the sources and strengths or weaknesses of the available data for assessing Latino participation patterns in the state's vocational education system. A preliminary study should also begin to identify methods to overcome obstacles that prevent greater participation on the part of Latinos in vocational education in Massachusetts. The information and conclusions offered in this paper may give some indication of the policy issues that we must raise and resolve in order to encourage a greater participation of Latinos in vocational technical education.

The next section of this report briefly discusses the methodology used for this investigation. The *Findings* section integrates the responses of the interviewees with an analysis of the hard data obtained from the Division of Occupational Education, State Department of Education. The last section provides conclusions based on the data analyzed and the interviewee's responses; it also contains several broad recommendations regarding areas and questions requiring further study and attention. The bibliography lists the literature that provides information nationally and locally regarding the experiences of Latinos in vocational education.

## Methodology

A thorough study of Latino experiences in vocational technical education in Massachusetts, as well as a content analysis of the available and germane literature, has not yet been produced. This paper begins to respond to this need by reviewing the reported participation rates and status of Latinos in vocational technical education programs approved by the Massachusetts Board of Education. These approved programs are referred to as *Chapter 74 programs*.<sup>12</sup>

The study is restricted to persons in grades nine through twelve during the school year 1990 to 1991. There are two reasons for this restriction. The first is that the framework for this research, in terms of time and scope, is limited. The second reason is that the Latino presence as officially reported in postsecondary vocational education programs is miniscule and reflects a major decline in Latino participation from their participation rates in vocational education programs in grades nine through twelve. This will be illustrated in one of the tables under the *Findings* section of this report. The findings are based on data provided by the Division of Occupational Education, Massachusetts Department of Education; the data have been aggregated and organized in several tables and charts. These findings are also discussed within the context of the interview responses.

Since information was collected for only one year (1990-1991), the status reported for Latinos here represents only a snapshot of the actual situation. The purpose of this snapshot is not to make definitive conclusions regarding the status of Latinos in vocation-

al education, but rather to raise questions and point to the kind of research that we need in Massachusetts regarding this topic. Hopefully, the snapshot provided here suggests the general framework that is necessary for more extensive and expanded studies of the experiences of Latinos and other people of color in vocational technical education.

In addition to an examination of data for the 1990-1991 school year, the investigators of this inquiry relied on a panel of fifteen interviewees familiar with various aspects of public schooling and vocational education. The members of this panel were interviewed regarding their understanding of Latino experiences in the state's vocational education system. The interviewees included the following persons:

**Therese Alston**, Educational Specialist, Division of Occupational Education, State Department of Education (Boston, MA);

**Pablo Calderon**, Developer and Construction Contractor (Boston, MA);

**David Cronin**, Associate Commissioner, Division of Occupational Education, State Department of Education (Boston, MA);

**Clifford Flint**, Principal, Putnam Vocational High School (Springfield, MA);

**Herberto Flores**, Executive Director, New England Farmworkers Council (Springfield, MA);

**Frank Llamas**, Coordinator, Massachusetts Vocational Technical Teacher Testing Program (Amherst, MA);

**Modesto Maldonado**, Assistant Superintendent of Education, Greater Lawrence Regional Vocational Technical High School District (Lawrence, MA);

**Anna Mangual**, Former Director, Massachusetts Action Project (Springfield, MA);

**Mary Ellen McDonough**, Educational Specialist, Division of Occupational Education, State Department of Education (Boston, MA);

**Starr Pipelas**, Director of Bilingual Services, Greater Lowell Regional Vocational Technical High School, (Lowell, MA);

**Edgar Rodriguez**, Instructor, Deen Technical High School (Holyoke, MA);

**Marta Rosa**, Member, Chelsea School Committee (Chelsea, MA);

**Jaime Talero**, Director, Oficina Hispana (Boston, MA);

**Anne Wheelock**, Policy Analyst, Massachusetts Advocacy Center (Boston, MA);  
and

**Beatriz Zapater**, Education Director, Hispanic Office of Planning and Evaluation (Boston, MA).

These individuals are directly or indirectly familiar with various aspects of the policies and delivery systems of vocational technical education in Massachusetts.

The interviewees were asked about possible sources of information regarding Latino participation in vocational education and to provide information about what they perceive as major obstacles to greater participation in vocational technical education on the part of Latinos. Interviewees provided some information about the following open-ended queries:

- How can the status of Latinos in vocational technical education in Massachusetts be generally characterized or described?
- What are major obstacles to greater participation on the part of young Latinos in vocational technical education in Massachusetts?
- Has vocational technical education worked effectively for Latinos in terms of preparation for occupations and jobs?
- What works to involve and attract Latinos into vocational technical education programs?
- What are some of the similarities and differences between the experiences of blacks and Latinos in vocational education in Massachusetts?

## Findings

Table 1 shows the total reported number of students enrolled in vocational technical education during school year 1990-1991 in grades nine through twelve, by race and ethnicity. As this table illustrates, Latinos comprised 8.4% of all enrollees in Chapter 74 vocational technical education programs. This figure is significantly higher than the statewide proportion of black students (5.9%) in vocational education programs. This is an interesting finding in that it indicates that, at least for the 1990-1991 school year, Latinos are the largest minority group in Massachusetts vocational technical education.

Another related finding is that a higher proportion of Latino students are enrolled in vocational education programs compared to academic or general programs in public schools. For example, in the 1990-1991 school year, 8.4% of all students in grades nine through twelve enrolled in vocational education programs were Latino, but only 6.8% of all students in these same grade levels who were enrolled in academic or general programs in public schools were Latino.

Nationally, there are more Latino and black students enrolled in vocational education programs than in academic programs. According to the Center for Educational Statistics, 51.5% of all Latino high-school students were enrolled in vocational education programs in 1987 and 30.5% were enrolled in academic programs; the remainder were found in programs of general study. For black high-school students, the enrollment figures were 51% in vocational education programs and 34.5% in academic programs.

But, only 37.4% of all white high-school students across the nation were enrolled in vocational education programs, while 45.1% were enrolled in academic programs in 1987.<sup>13</sup> These numbers further substantiate the important role of vocational technical education in addressing the educational needs of Latinos and blacks.

**Table 1**

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**Vocational Education Enrollment in Massachusetts, Grades 9 to 12, by Race and Ethnicity, School Year 1990-1991**

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| <u>Race/Ethnicity</u>      | <u>Number Enrolled</u> | <u>(%)</u> |
|----------------------------|------------------------|------------|
| White                      | 29,248                 | 83.9       |
| Black                      | 2,088                  | 5.9        |
| Hispanic                   | 2,938                  | 8.4        |
| Asian and Pacific Islander | 462                    | 1.3        |
| American Indian            | 106                    | 0.3        |
| Total                      | 34,842                 |            |

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Source: Chapter 74 Enrollment by Race/Sex, Grades 9-12, School Year 1990-1991, Division of Occupational Education, Massachusetts Department of Education (March 8, 1991).

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Table 2

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**Enrollment in Public Schools in Massachusetts, Grades 9 to 12, by Race and Ethnicity,  
School Year 1990-1991**

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| <u>Race/Ethnicity</u>      | <u>Number Enrolled</u> | <u>(%)</u> |
|----------------------------|------------------------|------------|
| White                      | 188,722                | 82.0       |
| Black                      | 17,461                 | 7.6        |
| Hispanic                   | 15,631                 | 6.8        |
| Asian and Pacific Islander | 7,759                  | 3.4        |
| American Indian            | 498                    | 0.2        |

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Source: Derived from "Enrollment by Race" (Table 3), Individual School Reports  
(October 1, 1990), Massachusetts Department of Education

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Latino students enrolled in vocational technical education programs in public school systems in Massachusetts are concentrated in ten of the largest school systems (see Table 3). The total number of Latino students attending these ten school systems is 906, as shown in Table 3. This represents 30.8% of all Latino students in vocational education programs throughout the state in grades nine through twelve.

Table 3

**Ten Public School Systems in Massachusetts with Largest Enrollments in Vocational Education Programs, Grades 9 to 12, by Race and Hispanic Origin, School Year 1990-1991**

| <u>School System</u> | <u>Total Enrollment</u> | <u>White</u> | <u>Black</u> | <u>Hispanic</u> |
|----------------------|-------------------------|--------------|--------------|-----------------|
| Boston               | 1411                    | 141          | 877          | 115             |
| Springfield          | 1074                    | 379          | 336          | 314             |
| Lynn                 | 911                     | 682          | 79           | 96              |
| Holyoke              | 684                     | 350          | 25           | 300             |
| Quincy               | 442                     | 416          | 6            | 5               |
| Somerville           | 436                     | 369          | 20           | 40              |
| Newton               | 408                     | 362          | 21           | 13              |
| Chicopee             | 373                     | 347          | 1            | 20              |
| Pittsfield           | 318                     | 296          | 21           | 1               |
| Fall River           | 297                     | 284          | 9            | 2               |
| Total                | 6,354                   | 3,626        | 1,395        | 906             |

Source: Chapter 74 Enrollment by Race/Sex (Public and Vocational School Systems), Division of Occupational Education, School Year 1990-1991, (March 7, 1991)

A majority of all Latino enrollment for 1990-1991 is found in twenty-two vocational high schools throughout the commonwealth as illustrated in Table 4. Altogether, these twenty-two vocational education high schools enrolled 1,596 Latino students, or more than half (54.4%) of all Latinos enrolled in vocational education throughout the state. These same schools enrolled a total of 19,296 white students, or nearly 66% (65.9%) of all white students enrolled in vocational education schools in Massachusetts.

These statistics show that the enrollment of Latino students in vocational education programs and schools is more dispersed than the public school enrollment of Latino students. The latter shows a greater degree of concentration in fewer schools and school districts. As recently reported, "More than half of all Latino students in the state's public schools are enrolled in four districts—Boston, Springfield, Lawrence, and Holyoke—although these districts enroll only 12% of all public school students in the state. . ."; and furthermore, "While the 10 districts with the greatest number of Latino students enroll only one-fifth of all public school students, they enroll nearly three-quarters (73.7 percent) of all Latino students."<sup>14</sup>

Table 4

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**Independent Vocational Education Schools in Massachusetts with Enrollments of 500 or More Students, Grades 9 to 12, by Race and Hispanic Origin, School Year 1990-1991**

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| <u>School</u>                             | <u>Total<br/>Enrollment</u> | <u>White</u> | <u>Black</u> | <u>Hispanic</u> |
|-------------------------------------------|-----------------------------|--------------|--------------|-----------------|
| Greater Lowell Voc. Tech.                 | 2090                        | 1655         | 43           | 244             |
| Greater New Bedford                       | 1632                        | 1501         | 90           | 31              |
| Greater Lawrence Voc.                     | 1525                        | 887          | 24           | 595             |
| Worcester Voc. School                     | 1446                        | 1199         | 67           | 144             |
| Southeastern Voc. Tech.                   | 1339                        | 1153         | 97           | 62              |
| Greater Fall River Regional<br>Voc. Tech. | 1153                        | 1137         | 6            | 4               |
| Northeast Metro Voc.                      | 1092                        | 1033         | 7            | 50              |
| Shawsheen Valley Voc.                     | 1067                        | 1051         | 9            | 3               |
| Montachusett Voc. Tech.                   | 1046                        | 937          | 22           | 63              |
| Whittier Voc.                             | 973                         | 900          | 13           | 55              |
| Assabet Valley Voc. Tech.                 | 915                         | 885          | 8            | 17              |
| Blackstone Valley Regional Voc.           | 907                         | 861          | 22           | 14              |
| South Worcester County Voc.               | 902                         | 824          | 3            | 66              |
| Bristol-Plymouth Voc.                     | 798                         | 753          | 11           | 19              |
| Minuteman Voc. Tech.                      | 727                         | 700          | 15           | 6               |
| Tri County Voc. Tech.                     | 697                         | 683          | 5            | 8               |
| Essex Agricultural Tech.                  | 691                         | 667          | 9            | 9               |
| So. Middlesex Voc. Tech.                  | 684                         | 483          | 19           | 179             |
| Old Colony Voc. Tech.                     | 503                         | 493          | 9            | 0               |
| Pathfinder Voc. Tech.                     | 520                         | 513          | 2            | 4               |
| Northampton-Smith                         | 526                         | 502          | 6            | 13              |
| Cape Cod Regional Voc.                    | 518                         | 479          | 26           | 10              |

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Source: Chapter 74 Enrollment by Race/Sex (Public and Vocational School Systems),  
Division of Occupational Education, School Year 1990-1991, (March 7, 1991)

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The largest vocational education program in terms of white enrollment in 1990-1991, discounting Chapter 74 exploratory, is carpentry followed by electrical (see Table 5). This is different for Latinos; the program for auto mechanics is the largest enrolled program for this group followed by graphic arts and printing communication. The programs having the highest enrollments for blacks are food management and cosmetology. It is important to find out how and why young people individually decide to pursue a vocational education career and whether certain career tracks are, in effect, chosen for particular groups. A few interviewees expressed concern that students of color are referred or tracked into curriculum paths requiring lower skills.

The interviewees also reported that the perception of vocational education as a "dumping ground" creates a potential problem in recruiting Latinos. This is similar to a finding in a study investigating the experiences of black students in vocational technical education in Massachusetts.<sup>15</sup> Jennings and Moore reported that many black parents in Boston would opt for vocational technical education for their children if they could be convinced that this kind of education provided quality schooling. But vocational technical education has a poor history in many school districts with large numbers of black students. These issues require further investigation in order to understand how to develop effective strategies to enhance the Latino presence in Massachusetts vocational education. What actually motivates or steers Latino and black students to choose career tracks that are different from those selected by white students? This kind of information could assist educators in developing strategies to encourage youth of color to seek out

those occupations and careers currently not reflecting diversity or that have been traditionally inaccessible to underenrolled students.

**Table 5**

**Vocational Education Programs in Massachusetts with Largest Enrollments, Grades 9 to 12, by Race and Hispanic Origin, School Year 1990-1991**

| <u>Program</u>            | <u>Total</u> | <u>White</u> | <u>Black</u> | <u>Hispanic</u> |
|---------------------------|--------------|--------------|--------------|-----------------|
| Chapter 74 Exploratory    | 5064         | 3869         | 506          | 573             |
| Carpentry                 | 2625         | 2396         | 90           | 116             |
| General Marketing         | 1724         | 1564         | 78           | 68              |
| Computer Programming      | 809          | 628          | 50           | 123             |
| Cosmetology               | 1269         | 1032         | 104          | 119             |
| Electronic Technology     | 1366         | 1089         | 65           | 172             |
| Community Health Work     | 826          | 738          | 18           | 66              |
| Food Management           | 2175         | 1844         | 178          | 130             |
| Electrician               | 2211         | 2017         | 82           | 88              |
| Plumbing and Pipefitting  | 907          | 828          | 42           | 27              |
| Automotive Body Repair    | 1279         | 1063         | 63           | 132             |
| Automotive Mechanics      | 2212         | 1881         | 93           | 181             |
| Drafting, General         | 1070         | 939          | 30           | 87              |
| Graphic and Print Commun. | 1334         | 1106         | 64           | 135             |
| Machine Tool/Shop         | 1279         | 1085         | 50           | 96              |
| Metal Fabrication         | 812          | 687          | 33           | 80              |
| Total                     | 26,692       | 22,766       | 1,551        | 2,193           |

Source: Chapter 74 Enrollment by Race/Sex, Grades 9-12, School Year 1990-1991, Division of Occupational Education, Massachusetts Department of Education (March 8, 1991)

There are some program areas in vocational technical education where black enrollment is closer to white than Latino enrollment. In computer programming Latino students had a higher enrollment in percentage terms (4.1%) than either blacks (2.3%), or whites (2.1%). But as shown in Table 6 the black student enrollment in community health work was insignificant at less than 1% (0.8%), while the Latino enrollment (2.2%) was similar to the white enrollment (2.5%).

**Table 6**

**Percentage Distribution of Enrollment in Largest Vocational Education Programs in Massachusetts, Grades 9 to 12, by Race and Hispanic Origin, School Year 1990-1991**

| <u>Program</u>            | <u>% all White<br/>Students</u> | <u>% all Black<br/>Students</u> | <u>% all Hispanic<br/>Students</u> |
|---------------------------|---------------------------------|---------------------------------|------------------------------------|
| Chapter 74 Exploratory    | 13.2                            | 24.2                            | 19.5                               |
| Carpentry                 | 8.1                             | 4.3                             | 3.9                                |
| General Marketing         | 5.3                             | 3.7                             | 2.3                                |
| Computer Programming      | 2.1                             | 2.3                             | 4.1                                |
| Cosmetology               | 3.5                             | 5.0                             | 4.0                                |
| Electronic Technology     | 3.7                             | 3.1                             | 5.8                                |
| Community Health Work     | 2.5                             | 0.8                             | 2.2                                |
| Food Management           | 6.3                             | 8.5                             | 4.4                                |
| Electrician               | 6.9                             | 3.9                             | 3.0                                |
| Plumbing and Pipefitting  | 2.8                             | 2.0                             | 0.9                                |
| Automotive Body Repair    | 3.6                             | 3.0                             | 4.4                                |
| Automotive Mechanics      | 6.4                             | 4.4                             | 6.1                                |
| Drafting, General         | 3.2                             | 1.4                             | 3.0                                |
| Graphic and Print Commun. | 3.8                             | 3.0                             | 4.6                                |
| Machine Tool/Shop         | 3.7                             | 2.3                             | 3.2                                |
| Metal Fabrication         | 2.3                             | 1.6                             | 2.7                                |

Source: Chapter 74 Enrollment by Race/Sex, Grades 9-12, School Year 1990-1991, Division of Occupational Education, Massachusetts Department of Education (March 8, 1991)

Table 7 shows the vocational education programs with at least fifty or more Latino students enrolled statewide and the proportion of Latino students in each program. The career track with the greatest proportion of students who are Latino is clothing management, production, and services. More than one-fifth (22.0%) of all students in this program area are Latino. Almost one-fifth of all students in the program areas of nursing assistant (19.0%) and institution, home management, and service (18.0%) are Latino. The vocational education programs that have at least fifty Latinos enrolled but the lowest proportions of Latino enrollment are general marketing (3.9%), carpentry (4.4%), and electrical (4.0%). Again, it is important to know why Latino students are exhibiting enrollment patterns different from other groups of students.

Table 7

**Vocational Education Programs in Massachusetts with Fifty or More Hispanic Students Enrolled, Grades 9 to 12, School Year 1990-1991**

|                                   | <u>Total<br/>Enrollment</u> | <u># Hispanic<br/>Students</u> | <u>% Hispanic<br/>Students</u> |
|-----------------------------------|-----------------------------|--------------------------------|--------------------------------|
| General Marketing                 | 1724                        | 68                             | 3.9                            |
| Computer Programs                 | 809                         | 123                            | 15.2                           |
| Data Processing                   | 529                         | 74                             | 13.9                           |
| Cosmetology                       | 1269                        | 119                            | 9.4                            |
| Electronic Technology             | 1366                        | 172                            | 12.6                           |
| Community Health Work             | 826                         | 66                             | 8.0                            |
| Nursing Assistant                 | 457                         | 87                             | 19.0                           |
| Clothing Mgmt., Prod. and Service | 278                         | 62                             | 22.0                           |
| Food Mgmt., Prod. and Services    | 2175                        | 130                            | 6.0                            |
| Instit., Home Mgmt., and Service  | 334                         | 60                             | 18.0                           |
| Carpentry                         | 2625                        | 116                            | 4.4                            |
| Electrician                       | 2211                        | 88                             | 4.0                            |
| Automotive Body Repair            | 1269                        | 132                            | 10.4                           |
| Automotive Mechanics              | 2212                        | 181                            | 8.1                            |
| Drafting, General                 | 1070                        | 87                             | 8.1                            |
| Drafting and Printing Commun.     | 1334                        | 135                            | 10.1                           |
| Machine Tool/Machine Shop         | 1279                        | 96                             | 7.5                            |
| Metal Fabrication                 | 812                         | 80                             | 9.8                            |
| Total                             | 22,579                      | 1,876                          |                                |

Source: Chapter 74 Enrollment by Race/Sex, Grades 9-12, School Year 1990-1991, Division of Occupational Education, Massachusetts Department of Education (March 8, 1991)

Several vocational technical education programs have a relatively high proportion of Latino students. Some of these programs, however, are small in total size and have less than fifty Latino students enrolled. Table 8 shows, for instance, that the heavy

equipment, maintenance, and repair program has a small statewide enrollment. The thirty-six Latino students enrolled in this program comprise almost two-thirds (63.6%) of all students enrolled. More than half (53.5%) of all students in radio and T.V. repair are Latino. This program enrolls thirty-eight Latino students statewide.

**Table 8**

**Vocational Education Programs in Massachusetts with Hispanic Enrollment of 15 Percent or More, Grades 9 to 12, School Year 1990-1991**

|                                          | <u>% Hispanics<br/>Enrolled</u> | <u># Hispanics<br/>Enrolled</u> |
|------------------------------------------|---------------------------------|---------------------------------|
| Heavy Equip. Maint. and Repair           | 63.6                            | 36                              |
| Mktng. and Distribution, and other       | 63.2                            | 12                              |
| Radio and T.V. Repair                    | 53.5                            | 38                              |
| Upholstering                             | 50.0                            | 10                              |
| Medical Secretarial                      | 32.0                            | 8                               |
| Radio, T.V., Production and Broadcasting | 25.7                            | 9                               |
| Fin. Services Mktng.                     | 25.3                            | 21                              |
| Clothing Mgmt., Production and Services  | 22.3                            | 62                              |
| Hotel/Motel Mgmt.                        | 20.2                            | 18                              |
| Nursing Assisting                        | 19.0                            | 87                              |
| Instit., Home Mgmt. and Service          | 18.0                            | 60                              |
| Renewable Natur. Resource                | 17.9                            | 7                               |
| Agribus. and Agric. Prod. Other          | 16.7                            | 11                              |
| Computer Programming                     | 15.2                            | 123                             |
| Major Appliance Repair                   | 15.2                            | 23                              |
| Total                                    |                                 | 525                             |

Source: Chapter 74 Enrollment by Race/Sex (Hispanic Percent), Division of Occupational Education, Massachusetts Department of Education, School Year 1990-1991, (April 25, 1991).

The next table shows that Latino enrollment in postsecondary and postgraduate vocational education programs is greater than black enrollment, but the proportion of total students is very small for both groups. Latino students comprise nearly 4% (3.9%) of all enrollment in postsecondary and postgraduate vocational education programs, while black students represent less than 3% (2.7%) of the total enrollment. There are no major differences in the enrollment of blacks and Latinos in postsecondary and postgraduate vocational education compared to enrollment in grades nine through twelve.

**Table 9**

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**Enrollment in Postsecondary and Postgraduate Vocational Education in Massachusetts, by Race and Ethnicity, School Year 1990-1991**

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|                        | <u># Enrolled</u> | <u>% Total Enrolled</u> |
|------------------------|-------------------|-------------------------|
| Whites                 | 1701              | 91.0                    |
| Blacks                 | 51                | 2.7                     |
| Hispanics              | 74                | 3.9                     |
| Asian/Pacific Islander | 39                | 2.0                     |
| American Indian        | 6                 | ---                     |
| Total                  | 1,876             |                         |

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Source: Chapter 74 Enrollment by Race/Sex, Postsecondary and Postgraduate Programs, School Year 1990-1991, Division of Occupational Education, Massachusetts Department of Education (March 8, 1991)

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The very few Latino and black students who are enrolled in postsecondary and postgraduate vocational education programs are concentrated in two areas. For instance, there are twelve black students in the practical nursing program out of a total black enrollment of twenty-seven. Similarly, in the statewide pool of forty-nine Latinos, twelve are enrolled in electrical technology and eleven are in practical nursing.

**Table 10**

**Postsecondary and Postgraduate Vocational Education Programs in Massachusetts with Enrollment of Fifty or More Students, by Race and Hispanic Origin, School Year 1990-1991**

|                                    | <u>Total<br/>Enrollment</u> | <u>White</u> | <u>Black</u> | <u>Hispanic</u> |
|------------------------------------|-----------------------------|--------------|--------------|-----------------|
| Food Products                      | 67                          | 64           | 0            | 0               |
| Nursery Operations and Mgmt        | 59                          | 58           | 1            | 0               |
| Cosmetology                        | 180                         | 174          | 1            | 4               |
| Architec. Design and Construction  | 55                          | 53           | 0            | 1               |
| Electrical Technology              | 70                          | 50           | 5            | 12              |
| Dental Assisting                   | 58                          | 54           | 1            | 2               |
| Physician Assisting                | 67                          | 63           | 2            | 1               |
| Practical Nursing                  | 398                         | 367          | 12           | 11              |
| Baking                             | 66                          | 64           | 0            | 1               |
| Heating, A/C, and Refrig Mechanics | 72                          | 66           | 1            | 3               |
| Automotive Mechanics               | 96                          | 82           | 2            | 7               |
| Drafting, General                  | 73                          | 63           | 2            | 7               |
| Total                              | 1,261                       | 1,158        | 27           | 49              |

Source: Chapter 74 Enrollment by Race/Sex, Postsecondary and Postgraduate Programs, School Year 1990-1991, Division of Occupational Education, Massachusetts Department of Education (March 8, 1991)

One factor influencing the enrollment levels of Latino students in postsecondary and postgraduate vocational education programs may be the completion rates for this group in secondary programs. If a certain level of Latino students do not successfully complete the secondary programs, this could reduce the pool of potential Latino candidates for postsecondary and postgraduate vocational education.

It is, however, difficult to determine or assess the completion rates of Latino students at this time. The reason for this is that the Division of Occupational Education does not currently report enrollment by grade level in the secondary vocational education programs. For instance, although information about total enrollment for a particular program is available, the actual number of twelfth graders cannot be determined since information about this kind of grade breakdown is not collected.<sup>16</sup> Furthermore, some vocational technical education programs are open for entry at any grade, thus some twelfth graders may not have received four full years of vocational technical education.

## Conclusions and Recommendations

One major conclusion of this study is that a large number of Latino students are already enrolled in various kinds of vocational technical education programs and schools; therefore, this topic should be receiving as much attention from the educational and policymaking community as the status of Latinos in "regular" or non-vocational education in public schools and programs. Another conclusion is that the state of information, data, and analysis regarding the recruitment, participation, persistence, and success of Latino students in vocational education programs is lacking in many ways; furthermore, it now must be prioritized by the Commonwealth of Massachusetts. Very little is known about Latino students' experiences in vocational education at the statewide, local, school, or individual program levels; yet, as stated earlier, this group can play a critical role in the development of strategies to improve the economy and educational system of Massachusetts.

The interviewees reported a high degree of dissatisfaction regarding the number of Latino or bilingual personnel. This was an area that they identified as an important element in guaranteeing the enrollment and persistence of Latino students. Another conclusion is that enrollment patterns of Latino students do differ from those of white and black students. In addition, there is an extremely low number of Latino students enrolled in postsecondary vocational technical education programs throughout the state of Massachusetts. The interviewees and the analysis of the data that were collected

suggest at least six queries and topics that we need to target for further and more detailed examination:

- how can we promote recruitment efforts and retention of Latino students into a broad range of vocational education programs?
- how can we improve recruitment of Latino and black students into postsecondary and postgraduate vocational education programs?
- how can we increase the number of Latinos in staff positions and then encourage them to be role models for young Latinos in vocational education?
- how can we effectively measure the status and assessment of the needs of Latino students?
- how can we increase and improve parental and community participation in vocational education?
- how can we use the curriculum as a tool to improve vocational education and as a way to train teachers in vocational education regarding the importance of appreciating racial and ethnic diversity in Massachusetts?

These queries and topics, identified as requiring further attention by the panel of interviewees and the analysis of the data, are consistent with the findings of the literature on vocational technical education and Latino students nationally.<sup>17</sup>

It is important to target and more systematically discuss the successful ways in which young Latinos have been recruited into vocational education programs. Comparisons should be made between Latinos in vocational education and Latinos in non-vocational education programs. One interviewee, Therese Alston, suggested that we conduct several case studies of specific programs and schools across Massachusetts and compare the experiences of Latinos and non-Latinos. Such research might provide

direction regarding effective strategies for increasing the participation of Latinos in quality vocational technical education programs.

The area of postsecondary and postgraduate vocational education programs also requires major attention. The number of Latinos and blacks enrolled in this level of vocational education is miniscule. Accordingly, this situation presents a problem with serious implications for the future availability of blacks and Latinos with higher skills in vocational education. It is also a problem because a greater pool of Latinos and blacks with postsecondary training could be a potential source of new vocational education teachers.

Another way to increase the participation of Latino students in both high school and postsecondary vocational education programs is to significantly increase the number of Latino faculty and staff. This should be a major priority especially in those programs with high proportions of Latino students. According to one interviewee, three major obstacles prevent this development: 1) language barriers, 2) lack of information about how to access professional careers in vocational education, and 3) discrimination. These obstacles must be addressed in order to develop realistic strategies for increasing the number of Latino vocational education personnel.

The panel of interviewees agreed that the presence of greater numbers of such personnel is a critical component for the effective recruitment and retention of Latino students. One interviewee commented that increasing the number of Latino role models is critical for helping Latino students succeed in vocational education: "Latino students need to see teachers of their own ethnic background to help give them a sense of trust

and feel that someone understands them." Latino faculty and staff in vocational education are needed not only as role models for youth, but as advocates for access, equity, and excellence for all students in vocational education.

In a survey published by the National Center for Education Statistics, it was reported that for the 1979-1980 school year there were only thirty-one Latino faculty working in Massachusetts vocational education programs out of a total faculty work force of 7,061. Although these figures are now more than ten years old, there does not seem to have been much improvement in this area. The proportion of Latino vocational education teachers in this state may still be far less than even the dismal national figure for 1980 of 1.5%.<sup>18</sup>

Currently there is only a small number of Latino teachers in vocational education, even in those places with high concentrations of Latino students. One interviewee pointed out that even in vocational schools where there is a large Latino population, as in Holyoke, there is a very small number (two) of Latino teachers. There are some efforts underway to improve this situation. For instance, the director of Bilingual Services at Greater Lowell Regional Vocational Technical High School is coordinating a project to produce a recruitment strategy manual for teachers of color, bilingual personnel, and women. Efforts of this kind should be encouraged. Reference should also be made to some of the germane findings and strategies of another study regarding recruitment of teachers of color in the public schools of Massachusetts, "The Recruitment and Retention of People of Color in the Teaching Profession in Massachusetts."<sup>19</sup> This report

may prove useful to those interested in developing effective strategies for the recruitment of Latino vocational education teachers.

Efforts to collect and periodically present data and analysis about Latinos in vocational technical education must be strengthened. As mentioned earlier, the new Perkins Act regulations require that improvement be made in the systematic collection of data and information in order to assess how "special populations" are being served by vocational technical education. Most of the interviewees expressed the need to have a better understanding of enrollment and participation patterns of Latinos and blacks in vocational education.

The rapid growth of the Latino population, along with its continuing high level of poverty, also calls for more effective ways of collecting, analyzing, and distributing information about the experience of racial and ethnic groups in vocational education. The Division of Occupation Education must play a major role in this effort, but it should do so in partnership with researchers who are familiar with the urban and educational experiences of students of color. Collaborative efforts could assist in developing a comprehensive database for the commonwealth, and perhaps even the entire New England region. Such efforts could also generate germane policy discussions. Applied research projects could also be started to compare carefully the experiences of Latinos and blacks in vocational technical education with comparable groups in academic programs. Additionally, a collaborative effort could periodically issue brief reports highlighting the vocational education participation and completion rates and patterns according to race and ethnicity as well as school system in Massachusetts. This kind of

project could also be charged with helping educators in vocational technical education to identify strategies and tactics that will improve learning for all students, particularly students of color.

The involvement of Latino parents in their children's vocational technical education programs is another issue that requires attention. Some of the interviewees suggested that Latino parents may not be well informed of the opportunities for students who have successfully completed a vocational education course of study. Furthermore, parents may not be equipped with the information needed to inquire about the quality of particular vocational education programs. One interviewee responded that "a lot of people in the Latino community still feel you have to be a slow learner to go into vocational education." This was reiterated by another interviewee who stated "in general vocational education [is] viewed as less valuable than a college track—the sense that if my child is not performing well then he might go into vocational education."

Moreover, the lack of bilingual vocational education personnel, and particularly native speakers, makes reaching out to Latino parents difficult. The lack of materials written in Spanish is another obstacle. If we are to increase parental participation and community awareness of opportunities in vocational education, then we must expand outreach. We must target Latino parents in this outreach by using information and language that will effectively reach Latino parents. One interviewee, who works in a district with a large Latino public school enrollment but a very small Latino enrollment in vocational education programs, stated that this also means "Having information in Spanish; workshops for parents about what vocational education is and educating them

about viable programs for their kids; word of mouth—if one student has a good experience it will spread; use of community access channel and Spanish radio stations."

Finally, several interviewees noted that the lack of an appreciation for the importance of a multicultural learning environment is a serious problem system-wide. We must review the curriculum utilized by vocational technical education programs to create awareness of the importance of racial and ethnic diversity in our society. A curriculum that does this can be an important tool, not only in attracting greater numbers of Latino students into vocational education, but in helping to prepare all students for the increasing racial and ethnic diversity that is characterizing the American work force, especially in Massachusetts.

Participation figures at the national level show that Latinos are enrolling in some vocational education programs and schools in significant numbers. Thus, it is timely to again raise the queries cited above in order to understand how to improve the participation, persistence, and achievement of Latinos in vocational technical education across the United States. There are several problems areas that we should target for attention and reform at the national level in order to enhance the quality of vocational education for all students and to increase educational and economic opportunity for Latino students in particular. We should direct efforts toward increasing the participation of Latino youth in vocational technical education in ways that do not reflect segregated tracks of learning. It is especially important that vocational technical education not be a dumping ground, or dead-end, for any student. Furthermore, it is possible to offer high-quality

vocational technical education to growing numbers of Latino students in ways that open the door to other kinds of advanced and technical educational programs.

Racial and ethnic diversity represents an important potential strength for the commonwealth. The field of vocational technical education and its leaders have an opportunity to play an important national role in showing that the commonwealth can respond to its growing diversity by bringing excluded groups into the economy productively. This can only happen, however, by encouraging, inviting, and allowing large numbers of Latino youth to fully participate in high-quality vocational technical education.

This leads to the last important point to be made in this report. It concerns the role that employers can play in making important contributions to the economic well-being of the commonwealth. This paper has focused on a *supply* question regarding vocational technical education and the employment of Latino youth. In other words, the investigation explores whether or not the system of vocational technical education is working effectively for Latino youth.

Since this is probably the first study of its kind, the conclusions and recommendations remain tentative until further study. However, we do not want to imply that the *demand* side of this question is not important. In other words, the attitudes of employers and labor leadership are also critical to ensuring that Latinos become skilled and employed members of the commonwealth's work force. We cannot assume that even if Latinos were receiving the most effective training and schooling in vocational technical education that this would automatically lead to acceptance into productive employment paying decent living wages.

While there are many reasons why the Massachusetts economy is not as healthy as it should or perhaps could be, employers must examine their own roles and leadership regarding the preparation of Latinos, in addition to examining access that this group has to quality vocational technical education.

### Endnotes

1. Irene Sege, "All Signs Point to Massachusetts Exodus," *Boston Globe*, 23 July 1991.
2. *Closing the Gap for U.S. Hispanic Youth: Public/Private Strategies* (Washington, DC: The Hispanic Leadership Development Project, 1988), v.
3. Maureen Coyle-Williams, "The Growing Need for Quality Vocational Education Programs for Individuals with Limited English Proficiency (LEP)," *Technical Assistance for Special Populations Brief*/National Center for Research in Vocational Education, vol. 1, no. 4 (December 1989).
4. Sheri C. Kallembach, *Students with Limited English Proficiency: Selected Resources for Vocational Preparation* (Berkeley: National Center for Research in Vocational Education/University of California at Berkeley, August 1990), i.
5. *Pioneers of Progress: Policy Entrepreneurs and Community Development* (Somerville, MA: Jobs For The Future, 1991), 2.
6. John D. Haverman, Sheldon Danziger, Robert D. Plotnick, "State Poverty Rates for Whites, Blacks, and Hispanics in the Late 1980s," *Focus*, vol. 13, no. 1 (Spring 1991).
7. Cited in Joanne Ball, "Hispanic Youths Not Reached by Job Training," *Boston Globe*, 31 October 1984.
8. This was reported in a draft study by Paul Osterman for a forthcoming publication on Latinos and poverty in Boston. The study is sponsored by the Boston Foundation's "Persistent Poverty Project" (Boston: 1991).
9. Therese Alston, interview (Massachusetts State Department of Education), Spring 1991.
10. See Maureen Coyle-Williams, "The 1990 Perkins Amendments: No More 'Business As Usual,'" *Technical Assistance for Special Populations Brief*/National Center for Research in Vocational Education, vol. 3, no. 1 (September 1991).
11. *Alert: Your State's Vocational Educational Plan* (Washington, DC: Center for Law and Education, April 1, 1991).
12. Chapter 74 programs are those programs that meet state regulations and that have been reviewed, evaluated, and approved by the Massachusetts State Department of Education's Division of Occupational Education.

13. J. Michael O'Malley, *Academic Growth of High School Age Hispanic Students in the U.S.* (Washington, DC: Center for Educational Statistics, March 1987), 73.
14. Ann E. Wheelock, *The Status of Latino Students in Massachusetts Public Schools: Directions for Policy Research in the 1990s* (Boston: Gaston Institute for Latino Community Development and Public Policy/University of Massachusetts at Boston, 1990), 11.
15. James Jennings and William Joseph Moore, *Vocational Education in Massachusetts and the Future of Young Minority Students* (Boston: William Monroe Trotter Institute/University of Massachusetts at Boston, 1988).
16. Chapter 74 Exploratory enrolls ninth graders; therefore, the number of students in this grade level can be determined.
17. *Hispanic Youth—Dropout Prevention: Report of Task Force on Participation of Hispanic Students in Vocational Education Programs* (Boise: Idaho Division of Vocational Education, July 1990).
18. "Sex and Racial/Ethnic Characteristics of Full-Time Vocational Education Instructional Staff," *National Center for Education Statistics Bulletin*/Center for Educational Statistics (November 1982).
19. *The Recruitment and Retention of People of Color in the Teaching Profession in Massachusetts*, Report of the Statewide Committee on the Recruitment of Minority Teachers (Boston: Board of Regents of Massachusetts, 1990).